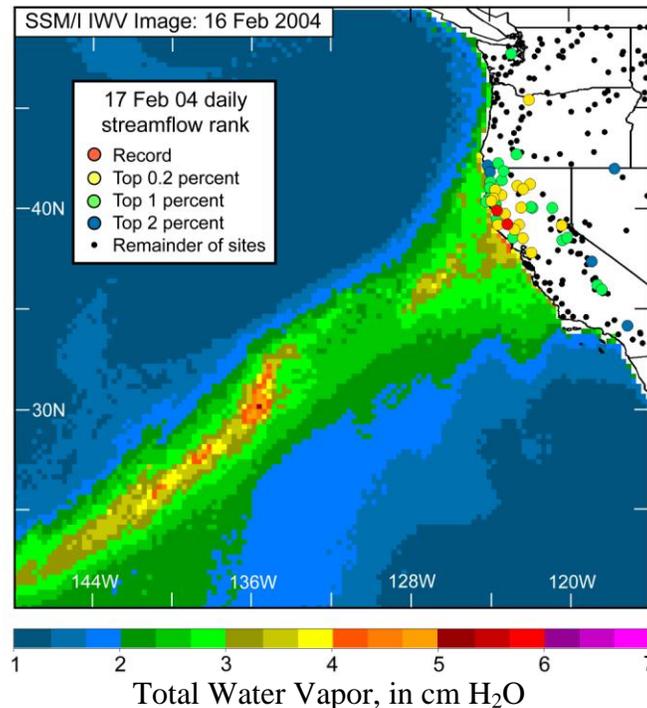


Delta Science Program Brown Bag Series Presents

Atmospheric Rivers, Floods, and the Water and Living Resources of California

Michael Dettinger, U.S. Geological Survey
Scripps Institution of Oceanography, La Jolla

Wednesday June 22, 2011, 12 noon – 1 p.m.
Cal EPA building 1st Floor: Training Room 1, East and West
1001 "I" Street, Sacramento CA 95814



Atmospheric rivers (ARs) play important roles in flooding and flood management around the world. ARs are narrow corridors of concentrated moisture in the atmosphere. Within these corridors the moisture in the air flows like a river, hence the term. AR corridors are approximately 150-200 miles across, can be thousands of miles long, and are responsible for most of the horizontal transport of water vapor outside of the tropics.

This presentation will show, among other things, that a handful of ARs per year make landfall in California, and those storms contribute 33-50 percent of the total average amount of rainfall for the entire state. AR storms have been the source of many floods in the Pacific Coast states. In most models providing current projections of 21st century global-climate responses to increasing greenhouse gases in the atmosphere, the average number of ARs reaching California, and their corresponding intensities, will increase moderately. Plans for the future management of California's water resources, restoration activities, and flood risk assessment will be further informed by understanding Atmospheric rivers and other recurring atmospheric features.